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EDITED BY WILLIAM HUNTING, F.R.C.V.S

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MEAT INSPECTORS.

If any illustration were required to make plain the necessity of substituting veterinary for amateur inspectors of meat, it is provided by the report of a Bermondsey meat case. Up to now the butchers' trade has probably been opposed to the appointment of veterinary inspectors, under the fear that inspection would be too stringent. In future we shall expect the butchers to insist loudly upon the appointment of the most competent men, and there cannot be two opinions that a properly trained veterinary surgeon is the fittest person to inspect meat. The evidence upon which a meat salesman was fined is really shocking. It is just possible that the meat was bad, but it is absolutely certain that the evidence of the meat inspectors was untrue, and altogether stupid. One man, who described himself as assistant to the sanitary inspector, said that when the beef was cut up "it was cut off the thick flank and he saw yellow pus, indicating *pleuro-pneumonia*" . . . . . "It did not come from the hip joint but was spread about the meat." The following question and answer then occurred. "Mr. Buckmaster:—Assuming that the animal was quite healthy and had received some injury to the joint, would that not cause the appearance of pus? No, it would not, the secretion of matter arising from accident and from disease is different."

Such statements as these show the unfitness of the witness to give evidence in a criminal prosecution. He seems destitute of even an elementary knowledge of disease and its products, and yet such evidence might send a man to prison.

The evidence of the sanitary inspector is better than that of his assistant. He ventures very little pathological description but rests his case on the general appearances—a much safer course. He states "It was very thin, there was an utter absence of fat and it was very wet." This certainly reads like a statement of fact, and clearly suggests flesh unfit for human food. It is remarkable that the assistant is not reported to have given any corroboration of this in his description of the meat. The inspector is by no means so clear when he comes to details—"he found the muscles surrounded with yellow pus or fatty matter." Does this mean that either yellow pus or fat (one of the two) surrounded the muscles, and that he could not distinguish which it was?—or does he imply that yellow pus is only fatty matter? Further on this inspector is reported to have said—"He inserted his finger beneath the muscles, which separated from the meat without the slightest pressure." This statement seems to distinguish between muscles and meat, and we are left to imagine what the structures are which separated. If the reporter has done Mr. Thomas justice, we can only say that butchers in the Bermondsey district are in a very unpleasant position when he has to give evidence against them. In answer to the question—I believe you may find pus in the joint of an animal that has suffered from injury? Mr. Thomas replied—"No, I should think not."

It would be grossly unfair if only fines might follow the evidence of such witnesses as these Bermondsey inspectors, but what are we to say in the face of the fact that imprisonment is often inflicted. Meat cases are heard all over the kingdom, and the inspectors are nearly always men with no pathological knowledge. Fortunately for the butchers the inspectors generally err in their favour by permitting diseased meat to escape their notice—but this is unfortunate for the consumer.

A man who cannot tell pus from fat, who asserts that an injured joint cannot contain pus, who thinks meat and muscle are two different things, who professes to be able to distinguish pus resulting from accident from that due to disease, and who diagnoses pleuro-pneumonia because there is pus in the flank, is really quite unfit to be entrusted with the care of human health in any department.

THE TERM "FARRIER."

Last week we foolishly expressed a hope that one of our correspondents would, on further consideration, be ashamed of having asserted that some members of the profession "know little and care less" what their schemes do for the country veterinary surgeon so long as they obtain a little cheap advertisement. The accusation seemed to us to bear a charge of such ignorance, selfishness, and meanness, that no one knowing it to be untrue would deliberately make. This week our correspondent repeats it, and adds a few further remarks which quite explain his position. We were wrong to have expected any shame; but could not have anticipated such guileless innocence.

R.V.C. APPOINTMENT.

We hear that Mr. Hobday, of Redhill, has been selected for the Junior Professorship at Camden Town. Mr. Hobday, before he went to practice in Surrey, held the position of Hospital Surgeon at the R.V.C., and all who know him will acknowledge that he possesses every requisite for the position he has attained.

CASES AND ARTICLES.

ON CASES OF INFLUENZA TRANSMITTED TO MARES FROM APPARENTLY HEALTHY STALLIONS.

By Trevor Spencer, M.R.C.V.S.

I was much interested in the report of the address on the above subject delivered by Mr. A. Chivas, before the members of the North of England V.M.A., and my object in sending you this brief statement of my own experience is because I think perhaps it may form a link in the chain of evidence which is accumulating on the subject.

Some time ago whilst treating a case of lymphangitis at a certain farm the proprietor casually remarked to me as we passed the stable that a grey cart mare which was in one of the stalls "seemed a bit stiff," that she had been served a few days before, and that the horse, a heavy one, was "very fresh and random," and this he thought would account for her indisposition. As he considered the matter unimportant and did not ask my opinion, I having seen the other patient, left the farm. It was, I think, late on the following evening that he arrived post haste with the request that I should attend the grey mare at once, as she was suffering from some alarming disease which he had never before seen.

I found my patient exhibiting every symptom of that low form of influenza characterised by high fever, extensive œdema of eyelids, extremities, mouth, nose, and abdomen, constipation and bilious visible mucous membranes.

Knowing as I did that the district was free from this disease, I asked a few questions as to the stallion and was told that he appeared in perfect health, and was in fine condition.

A few days afterwards I was called to a farm situated about one and a quarter miles from the one last named. Here my opinion was desired respecting a bay cart mare which showed exactly the same symptoms as those detailed above. On asking if she had been served of late I was answered in the affirmative, and the horse proved to be the one which had done duty in the other case.

On my rounds a couple of days afterwards I chanced to meet the horse in another part of the district, and took the liberty to make a gratuitous survey of him, and to put a few questions to the groom to whom I was unknown. I soon satisfied myself that to all appearances the animal was in a state of perfect health and he looked "very fit." From the attendant I learned that the horse had never been sick or sorry, except that he together with the other horses had a bad cold back in the winter.

At this time a patient was brought to my yard, and it was not difficult to discover that she was giving warning for an attack similar to that from which the others were suffering. I learned that this mare had a few days previously been served by the evil-doing, albeit well-meaning, stallion. The farm from which this patient came is about 2½ or three miles from either of the others, and on visiting her at her stable I found that the same low form of influenza was well marked.

I had the three cases isolated and comfortably housed, but if I remember right only one horse, and that a very old one, escaped the infection in the three stables which had contained the mares primarily affected. The medicinal treatment, under which with cooked food and pure air all the cases did well, consisted of repeated doses of magnes. sulph. which I find a valuable agent in these cases, and small doses of stimulating febrifuges. I have no experience which will allow of my holding the opinion that a horse which has suffered from influenza nine months or more previously, is capable of transmitting the disease to a mare, but that this is possible over a period of two or three months, I have in my own mind no shadow of doubt.

The horse being the property of a gentleman living at some distance and not doing much service in my district, I am not able to say of what other depredations he may have been the cause. Neither, unfortunately, did the desirability of enquiring whether either of the three mares proved in foal to this particular service, occur to me. These outbreaks were confined to the three farms, and as far as I could ascertain no other cases of influenza occurred in the neighbourhood at this time.

CASTRATION STANDING *V.* CASTRATION UNDER CHLOROFORM.

By T. M. McConnell, M.R.C.V.S.

What are the advantages claimed for castrating the horse in the standing position? 1st. That the operation can be performed more quickly. This I grant, and that there will on an average be a saving of time of from ten to fifteen minutes on each animal operated on. 2nd. That fewer hands are required to assist. This I will also grant to the extent of two or at most three; but in country districts where nearly all colts are castrated early in the morning, mid-day, or evening when the farm labourers are not engaged at work, this advantage is of very minor importance. 3rd. That the operation can be done more cheaply. This I will also admit, but it is almost too paltry to be mentioned, as the cost of chloroform does not on an average cost more than sixpence per colt. 4th. That the operation can be performed with less risk of accidents to the patient during the operation. This I deny, and on the contrary hold that the risk is far greater than operating under chloroform. What happens if the standing operator performs, as I have known him perform, on a colt with concealed scrotal hernia? Why, the bowel escapes through the scrotal wound in such volumes that it defies the operator to return it, whereas in a similar case if the animal be under chloroform and on his back, the bowel can be returned with comparative ease, and its position in the abdomen secured. Another risk of pretty frequent occurrence which the standing operator has to contend with is the animal throwing itself down during the operation whilst the instrument is fixed on the spermatic cord.

On the other hand what are the advantages claimed for castration under chloroform? 1st. It is much safer for the operator. This requires no argument as it will be conceded by all. 2nd. The operation is painless, and this from a humanitarian point of view ought itself to outweigh ten times all the advantages of the standing operation put together. 3rd. The operation can be performed much more neatly and scientifically, and consequently more successfully. 4th. We can operate by whichever method we choose, by *ecraseur*, torsion, ligature, or firing; whereas operating standing admits only of the *ecraseur*. I have purposely omitted operating by clams, which can be adopted in either case, as I consider tying two pieces of wood or iron tightly on to such a sensitive structure as the spermatic cord and leaving them there from twelve to twenty-four hours, as in ordinary cases of castration, such a brutal and barbarous proceeding that it ought to be tabooed by the whole profession. 5th. Under chloroform we can operate in cases of scrotal hernia, in cases of diseased testicles with adhesion of the tunics to the scrotum, and the standing operator cannot do so. 6th. We can operate on cryptorchids and in those cases where the testicles lie in the inguinal canal—these I do not consider cryptorchids at all—and here again in both cases the standing operator fails. 7th. The standing operator through viciousness on the part of his subject is sometimes beat to operate, the operator under chloroform can always succeed.

To summarise then:—The standing operator can perform more quickly, with fewer hands, and at less cost by sixpence per colt than the operator under chloroform, but he performs the operation in a painful, rough, haphazard, "groping in the dark" sort of fashion, with great risk to his life and limbs; is confined practically to one mode of operating, and in many cases cannot operate at all.

The operator under chloroform on the other hand, although he takes more time, and requires more hands, performs the operation with much greater safety to himself and with greater immunity against accidents to the patient; he performs the operation more coolly, clearly, aseptically and successfully; he can perform the operation by whatever method he chooses, and under all known conditions; and above all he performs it without inflicting unnecessary pain.

CONTRACTED TENDONS.

By J. Roalfe Cox, F.R.C.V.S.

For what they may be worth may I offer a few remarks on this subject, supplementary to the contributions which have appeared lately in *The Record* on the cases described as *contracted tendons*.

I have no doubt we are all thinking of the same kind of infirmity affecting the horse's limb; the condition which is chiefly met with in draught horses, and more often in the fore than the hind leg; but in whatever class of animal and whether in the fore or hind, my experience has instructed me to the same conclusion as to the nature of the resulting deformity. It is I believe in the large majority of instances *not the result* of strain or sprain, but is a secondary affair the outcome of pre-existing disease and pain and lameness in another part altogether. The exceptionally less number of cases commencing in strain and lesion of structure about the subcarpal or subtarsal ligament and its connection with perforans tendon are sufficiently marked at the onset to facilitate diagnosis. In the first suggested class of case what happens is this; the horse being lame, some thickening is discovered at the anterior and upper part of the flexor tendon, a less amount of weight is being habitually borne on the limb, and slight alteration may be observed in the position of the pastern—a less degree of obliquity—which is very markedly contrasted by raising for an instant the sound foot. This thickening of parts about the tendon then more or less gradually increases until a rounded, tough-feeling swelling has formed, some three or four inches long, maybe just below the knee, markedly to the front of the tendon, and now embracing the sides also, with perhaps some bulging at the back. This resting of the foot as, Mr. Greaves so well describes it, in any hollow in the stall paving, and in another not uncommon way by lodging the heel of the lame foot on the wall of the sound one, may be noticed at a time when only very slight thickening is discoverable under the knee, and the explanation of the shortening of the subcarpal or tarsal ligament consequent on diminished normal tension from habitual disease or the resting position, so lucidly given by Professor Walley, tell the tale of the antecedent disease elsewhere.

I have found on hind or fore the primary mischief to be disease of the foot-joints, and more than any other the distal one of the *os coronæ*, but ring-bone in one of its forms I am well satisfied is the chief precursor to the so-called contracted tendon cases. It may, of course, be associated with spavin exceptionally, but thousands of cases of spavin occur without the complication resulting. In the instance of strain leading to the deformity there are more or less sudden and immediate signs of the lesion, with imflammatory condition of the parts and swelling of the limb beyond the seat of the injury, whilst in this secondary involvement of the ligament and tendon the early local indication is but slight. I believe only at the early stage of this double trouble is there chance of useful result from treatment, and my course for choice has been *firing* over the coronet and pastern as well as over the thickening about the tendons; to make no alteration in the shoe except remove the calkin; and give the horse chance to roam about as he may in a roomy box, till he may get wider range at pasture.

It will be noticed that Mr. Greaves recommends the patten shoe for the chronic case. The chronic cases of this kind being at work are those which are bound to attract and have attracted the question of cruelty in use, and with resulting divergence of veterinary expert opinion. Now I take it there is not much likelihood of wide difference of opinion professionally, as to the state of affairs pathologically and physiologically, but on the question of cruelty or not, *tot homines tot sententiæ*, and I believe an explanation of this may be entertained in the absence of an

accepted authorized legal definition of the term *cruelty*, for guidance in evidence, and under which each individual might be equally instructed and influenced in forming his judgment. The sympathies of witnesses equally well intentioned and honest may lead to different interpretations of cruelty in a given case. Suppose the presiding Magistrate on such occasions were to instruct the witness that cruelty in its legal enforcement and as applicable to a case in question means *such and such, no more no less*; I fancy there would be more unanimity, and less stigma falling on professional evidence.

INDIAN HEMP AS AN ANODYNE.

By Vet.-Capt. F. Smith, Aldershot.

The remarks in your last issue by Mr. J. D. McLaren, respecting the usefulness of the above drug, compels me in defence of an agent of great therapeutical power, and in justification of numerous experiments, once more to place on record that excepting Chloral Hydrate it is the only anodyne and sedative in equine practice with which I am acquainted.

If I might suggest it, I should explain Mr. Mc Laren's failure as being due to an insufficient dose, or perhaps the drug having undergone change, or to the nature of the preparation used. There is an impression in India that the agent does not keep for long, but I do not consider that holds good in this country. I brought some home with me, and I know it was as active five years later as it was abroad.

Respecting the preparation, I have never seen in this country the hemp used in India. I have had fluid extracts sent me for trial, but they are quite useless. The hemp I allude to is a *solid extract*, the consistence of very thick treacle, of an olive green colour, and so difficult and dirty to handle that I never think of weighing it out, but with a spatula take up what I judge to be *an ounce* or even more, twist it up rapidly in paper, place some lard on the latter, and put it without further delay down the animal's throat.

If Mr. McLaren can obtain this form of Indian Hemp and will give the dose I mention (or even an ounce and a half or two ounces for a big and violent horse) he will never regret having given the drug another trial.

The agent generally acts within the hour, occasionally in half an hour; the horse often stands fast asleep, can only be roused with difficulty, and is so anæsthetised that the skin may be severely pricked and no notice taken of it. I am sure painful operations could be performed under its influence.

If the form of drug to which I allude is unobtainable in this country, Messrs. Treacher & Co. Chemists, Bombay, will doubtless take the trouble to obtain the real article for any home firm who wrote to them on the matter.

I trust Mr. McLaren will favour us with the results of any further observations on the horse of the action of the Indian Hemp above described.

INTERESTING SURGICAL CASES.

By E. Wallis Hoare, F.R.C.V.S., Cork.

Punctured Wound in the Region of the Neck.

The patient was an aged van horse. He received a punctured wound from the shaft of a car in collision, about midway down the neck close to the jugular furrow. When brought for treatment next morning there was a considerable amount of swelling around the wound. The extent of the wound would admit of one finger being introduced, but it was very deep, and in a downward direction. The jugular vein and carotid artery could be distinctly felt. On washing out the wound with antiseptic lotion, a violent fit of coughing was produced, and great constitutional disturbance. There was no puncture of the trachea to be detected, so the occurrence of the above-named symptoms must be ascribed to irritation of the vagus.

The swelling in the neck gradually increased, and all attempts to wash out the wound were followed by the symptoms described. Hot fomentations rendered aseptic were persevered with, and the animal made a good, though rather protracted, recovery.

Large Scirrhous Cord.—Operation.

The patient was a cart gelding, aged about 13 years. When brought for treatment the owner stated that a small growth had appeared a short time after the animal had been castrated, but it did not begin to assume any size of importance until the last few years. He had applied various remedies in the form of caustics in order to try and stop its progress, but without avail.

On examination I found that the growth hung between the thighs, and involved a large amount of space, extending up to the sheath, and very hard in consistence in every portion. An unfavourable prognosis was given as to the result of an operation, but however the owner consented, as the animal was of no value in his present state.

On July 7th the horse was cast and chloroform administered, and with the able assistance of Mr. R. Ring, M.R.C.V.S., Mallow. I commenced to dissect the skin as carefully as possible from the growth, which proved rather difficult by reason of the extreme hardness and size of the tumour, and the firm adhesion of the skin.

Numerous bloodvessels were met with and ligatured, but in consequence of the large amount of surface which required cutting into, there was rather an alarming amount of capillary hœmorrhage. After a great deal of troublesome dissection, chiefly performed with a pair of scissors, (which I prefer to the knife in such cases, as there is far less hœmorrhage, although it may not look scientific surgery) we got to the base of the growth which was of great size, and found in addition that there was a second scirrhous growth attached to the other cord, both being adherent.

After some trouble the chain of an ecraseur was placed around the base of the large growth, as high up as possible, and the handle of the instrument slowly turned, but the chain broke in a short time.

Another ecraseur of Farmer Miles' pattern was now adjusted, and with the application of great pressure and plenty of time the base was gradually cut through. This instrument is a very superior article, as although both hands were employed to work the handle, the chain was not even strained in any way, and the amount of tissue to be cut through and its hardness was very considerable. This instrument was manufactured by Messrs. Krohne and Sesemann, London.

The second growth was now excised, and the wound, needless to say, of enormous extent, plugged and sutured. The growth weighed 9-lbs. 2-oz.

After some time the animal came to; he had received altogether eight ounces of chloroform, and the operation lasted 45 minutes. There was very little hæmorrhage until consciousness returned, when the blood commenced to flow persistently in a slow stream, which was subdued after some difficulty by means of plugging and tr. ferri. perchlor. As the patient got rather weak, a free amount of stimulants were given.

Next morning there was again slow hæmorrhage occurring at intervals, but the patient looked fairly well, though feeding badly. It was found that some of the chloroform had escaped into the mouth and nostrils while being administered when the animal was on his back, which caused severe excoriation of the mucous membrane.

For the following four days it seemed as if the patient would not pull through. There was enormous swelling extending to the sternum, and great stiffness in progression, and in addition a discharge from the nostrils of an offensive character. The temperature ran up to 103·5, and there was no desire for food. The cavity was thoroughly washed out twice daily with a solution of Jeyes fluid 1 to 50, by means of Read's syringe and long gum elastic tube, plenty of iodoform being applied afterwards. The swelling was fomented diligently, and the animal was given potass. chlor., ʒss. twice a day. Plenty of green food and milk were also allowed, and an hour's walking exercise daily.

The animal gradually began to feed well; the discharge from the wound assumed a healthy character, and after three weeks of troublesome attendance and dressing, he was sent home to the owner fit to work, and has worked hard during the harvesting season.

There are a few practical points which call for notice in connection with this case. 1st. In operations of this nature there is a great tendency to secondary hæmorrhage, especially in the reaction which follows the use of chloroform, and although when the operation is completed there may be no signs of hæmorrhage, we should not finish without firmly plugging the cavity with antiseptic material, so as to prepare for the reaction in the circulation which is likely to follow, as secondary hæmorrhage from so large a surface once established is very difficult to suppress. 2nd. In administering chloroform, when the animal is secured on his back, great care is necessary in order to prevent the fluid from escaping into the mouth and nostrils, as it exerts a very irritating action on mucous membranes. This can be avoided by using a proper sized sponge and pouring in the fluid carefully.

VETERINARY SOCIETIES.

SOUTH DURHAM AND NORTH YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

The fifth annual meeting of the South Durham and North Yorkshire Veterinary Medical Association was held in the North Eastern Hotel, Darlington, on Friday, September 8th, 1893, at 3.30 p.m. Mr. F. R. Stevens presided. There were also present Messrs. J. G. Deans, P. Snaith, H. H. Roberts and J. R. Crone, Bishop Auckland; Messrs. W. T. Briggs, G. J. Harvey, W. N. Dobbing, C. G. Hill and C. T. Holmes, Darlington; Jno. Nettleton, Northallerton; W. A. Hancock, Newcastle-on-Tyne; G. E. Gibson, Ferryhill; W. Awde, Stockton-on-Tees. Mr. E. R. Gibson, Coxhoe, was present as a visitor.

Apologies for non-attendance were received from several members.

The minutes of the previous meeting were taken as read and confirmed.

The SECRETARY reported that in consequence of his having only received three favourable replies from members who were likely to attend the proposed picnic the Committee decided to abandon it.

Mr. HARVEY reported a case of endo-metritis which had occurred in a white heifer.

Mr. NETTLETON also brought to the notice of the members a successful operation he had performed on a mare under chloroform for ruptured perineum. The passage had been ruptured in the act of parturition, and the fæces were voided from the vagina. Three sets of sutures were used, one to each mucous membrane, vaginal and rectal, and a deep set through the muscular structure. It had been necessary to operate twice, the first being only partially successful, but the second operation was a complete success.

Mr. C. G. HILL, M.R.C.V.S., Darlington, and Mr. G. E. Gibson, M.R.C.V.S., Ferryhill, were admitted members of the Association on the proposition of Mr. F. R. Stevens, seconded by Mr. Awde.

Mr. DOBBING then nominated Mr. C. T. Holmes, M.R.C.V.S., of Darlington, for membership.

Mr. F. R. STEVENS then proposed "that it is desirable that some tooth instruments be purchased for the use of members of the Association, and that Messrs. Arnold and Huish be asked to forward instruments for extracting molars, and tooth shears for cutting same, for their approval at the next meeting;" seconded by Mr. Roberts and carried.

Mr. DOBBING then moved a resolution that in future members of the Association should give no particulars when sending out their accounts, but might give details if requested to do so.

Mr. AWDE seconded the proposition. In the discussion which followed some members stated that they already followed this rule, but the majority present seemed to think that it would not be generally acceptable to their clients. As the feeling was against the resolution it was decided to withdraw it.

Mr. STEVENS then vacated the chair in favour of Mr. J. G. Deans, the president-elect, and was accorded a hearty vote of thanks, proposed by Mr. Nettelton, and seconded by the Secretary.

PRESIDENTIAL:—ANTHRAX: CHLOROFORM.

By J. G. DEANS, M.R.C.V.S.

Gentlemen,—In the first place I take the liberty or rather opportunity of thanking you for the honour conferred in electing me as your president for the coming

year. As is customary I say I am sure there are many of your members whom I consider would far more fittingly grace the position than I can, but I suppose I must just do my best and trust to the co-operation of all the members to try and make the year a successful one.

We are adding to our members every year, I may say every meeting, and we ought all to be very pleased to see so many visitors here to-day; it shows a unity in our profession worthy of our motto, *vis unita fortior*.

I must apologise to those who have come from a distance expecting to hear some interesting and instructive paper from one of the shining lights of our profession, but we have been disappointed in not being able to have Professor Macqueen. Owing to the retiring of Professor Axe Professor Macqueen has had to take up some new subjects and cannot spare the time now to honour us by reading a paper, but has promised to do so at no distant date. With your kind forbearance I will endeavour to make a few remarks on Anthrax, and then on the Administration of chloroform in all operations of a serious character.

ANTHRAX.

Its history seems to have been traced back to the time of the plagues, and some authorities state that this was the ailment which caused the death of the cattle of the Egyptians, whilst others assert it was foot-and-mouth disease; but this is of no importance to us. as the profession must have been very much in its infancy then, and I don't think anything would have been known about the germ theory of disease. I intend to-day only to call your attention practically to the various points of interest to us as veterinary surgeons.

Etiology. Animals that have been drinking stagnant water, or water coming from or containing sewage have often been found to suffer from anthrax more so than those that have been accustomed to good, clear and pure water. For instance, there was an outbreak of anthrax at a farm through which flowed a stream that supplied all the farms where there had been an outbreak of anthrax in the same district for the last seven years. This raises the questions: can the bacillus anthracis remain latent in the water, or is there a spontaneity of origin, or does some simple, benign organism under certain influences become transformed into the bacillus anthracis.

In my opinion the bacillus can remain latent, and as proof of that theory I will quote some cases which came under my notice on one farm in our neighbourhood. A certain farmer bought some sheep twenty-eight years ago at Stockton and put them into a certain field on his farm, this farm I may state had never before this time been known to harbour anthrax, and in about two weeks afterwards he lost nearly all the sheep together with a horse and some other animals that were grazing in the same field. He forgot all about this until seven years ago, he had a cow die suddenly and others unwell, and his veterinary surgeon certified the cause of death to be anthrax, and that the other animals were suffering from the same complaint. I do not remember how many died but I think about three or four. Again two years ago when the cows were grazing in this same field there was another outbreak of anthrax. Now it could not very well happen that this person had anthrax imported on to his farm at three different times and none of his neighbours have any of their stock affected. I think that the germs of the disease must have been in the soil after the first outbreak, as the sheep that died first were buried in the same field, and that owing to drainage or some climatic influence the bacillus was brought up to the surface, and the animals feeding on the field got contaminated.

I do not credit spontaneity of origin, but it has been proved that you can attenuate or lessen the virulence of a disease by continued cultivation of the virus downwards, and if that is so, some people hold that influences may be brought to bear on benign organisms so that they may attain to the most virulent character. The bacillus subtilis found in impaired cotton cake can be cultivated until when inoculated into an animal it will produce a disease resembling, or in fact analagous to anthrax; and the bacillus anthracis can be found and cultivated from the blood of the animal so inoculated. As a proof of the appearance of this disease on a farm where such a thing never had been heard of before, and where there had been no importation of cattle for a considerable time, I may state that I was called to go to a case near Frosterley, where the farmer said he had lost a cow the day previous and had another one unwell; from the description given me of the cases I supposed it was a case of anthrax and took drinks to the number of cattle on the place, together with some Jeyes fluid. When we got there the other animal had died, so with Mr. Gibson, who was then assisting me, I commenced to make a post-mortem of the last animal that had died, and found our worst fears to be confirmed. During the examination Mr. Gibson accidentally scratched his hand, and I advised him to suck the wound but he did not seem to care to, so I did it for him. A butcher who was looking on merely held up the legs while we were dissecting, I never though for a moment that there was any danger or likelihood of his being inoculated, but to my surprise about a week afterwards I heard that he was suffering from malignant carbuncle, and had to have part of his arm taken off. The piece amputated was sent to London and examined microscopically and found to be teeming with bacilli anthracis; thus proving that the animal must have died from anthrax. Now here comes the strange part of the business. We gave all the cattle on the farm—and some were standing in the same byre as the two that had died a cow-drink composed of Epsom salts 1lb. together with tonics, adding ½ an ounce of Jeyes fluid to each drink, and there was not another animal took the disease, and never has since; and there could be no mistake that the butcher's case was absolute proof of the nature of the disease. I could not in any way account for this isolated outbreak except that the farmer was feeding the cattle on foreign cotton cake; but perhaps some member present will be able to suggest a solution to this difficulty.

Some of the experiments which have been carried on by specialists in this branch might be interesting, although personally I cannot see what use they can be to us with the present anthrax order in force. Pasteur had ten cows and 50 sheep given him to experiment on; six cows were to be inoculated, four not; 25 sheep to be inoculated and 25 not; the whole to be afterwards inoculated with the uncultivated virus. The 25 sheep and six cows were inoculated with five drops of vaccine, and after 12 days were inoculated with a stronger cultivated virus. Two days afterwards the whole of the animals—those that had been inoculated and those that had not—were inoculated with the uncultivated virus. Two days after this, of the 25 sheep not protected with the cultivated virus 21 were dead and others dying; the non-protected cows were suffering from intense fever and had great swellings on the seat of inoculation. The protected sheep were all well, and likewise the protected cows. I think the above experiments prove that the treatment and prevention of disease by inoculation is just in its infancy, although it can't be expected that we hard-working, every day kind of veterinary surgeons can have the time or inclination to carry out these experiments to a definite end.

What I should suggest is that so much money should be allowed annually by the Board of Agriculture to some energetic and scientific veterinary surgeons to carry out such experiments, and when they have the matter simplified and made feasible for us to take up, then we may

do so without running the risk of our operations being failures or perhaps causing the death of our clients' stock.

For instance, I bought, from a well known firm of veterinary chemists 50 tubes of vaccine to vaccinate dogs to prevent distemper. I went to one of the largest breeders of Collies in England and inoculated several puppies on the inside of the ear and found no result whatever; I continued the operation for several days, and had to give up in disgust, after my client who was deeply interested in the matter had a good laugh at my expense. What was the cause of failure I cannot say, but if anyone would care to try the operation I will gladly give them some tubes, as the fault may have been mine.

In concluding this subject I may say that with the great risk to human life attending the post-mortems of anthrax it becomes us as veterinary surgeons to exercise all our ingenuity and professional ability to try and prevent the spread of so virulent a disease, this can only be done by careful and practical study of the nature, history, and propagation of an outbreak when we have one in our district, and then coming to such meetings as this and in all fairness admitting where we are at a loss to understand anything, and thereby obtain from our brother professionals that information which we may lack whilst we may be able to impart some similarly valuable information on other subjects.

Chloroform.

The next subject I intend to make a few remarks on is as to whether it is desirable or necessary to administer chloroform when operating on the lower animals unless in very exceptional cases. I see in *The Record* for August 26th an editorial that pretty well expresses my sentiments on the matter. In it Mr. Hunting states pretty clearly the cases where it is necessary and where it is merely a waste of time and money. I consider that half the pain of an operation in the human subject is the anticipation thereof, and in our operations we have not that difficulty to contend with. In the dog, for instance, the majority of operations can he done before you would have time to give chloroform, and if howling be an indication of pain you have most of that during tho administration of the anesthetic. Again, the question of time comes up, it takes more time to give the chloroform and await the recovery of consciousness after the operation than the whole operation takes to complete. You cannot always have someone with you competent to give chloroform, and should your patient die, then if your assistant was not a qualified veterinary surgeon, although you have not a coroner's inquest to attend it is sometimes rather unpleasant.

I contend that until our clients can pay us better we need not bother to try and be too humane at the expense of our professional reputation and the risk of being considered exorbitant in our charge. I consider that if a good tourniquet be placed above the seat of operation if on the limbs, or some local anesthetic used if not suitable for the application of a tourniquet, the operation performed in an expeditious manner, then we have done quite sufficient in the majority of cases. But if you commence with an operation of the nature of which you know nothing until you have cut down on—say, for instance, a tumour, and find that you have not all the instruments you require with you and have to manufacture them out of anything you can lay hand on—knitting needles, kettle spouts, etc., in that case it would be better if your animal were under chloroform.

A correspondent in last weeks *Record* takes up the cudgels on behalf of humanity, and says surely it is not elevating the standard of veterinary surgery to entertain the question of time and expense. Well I don't see where we are to sacrifice or devote our time and money for the benefit of the owners of stock if they don't care to pay for the same. Mr. Dobbin has just suggested that we send in our accounts without stating items, etc; if we did that and operated under chloroform, in the majority of cases we would have our bills sent back, whereas if we write an elaborate bill out to this effect; casting and operating under chloroform on horse's teeth, so much—even if only removing a wolf tooth, we might have some chance of getting paid—the mysterious always acts on the British public. This correspondent goes on further to say "there are men who would not hesitate to spend a long time exposing the metacarpal nerve, or who would slowly cut away the most sensitive structures in the foot in quittor, quite unmindful of the mute appeals of the poor unfortunate bound down in a helpless condition." This I do not believe. I consider his remarks a great reflection of the profession. But this I do know, that when you have given you a pet dog to do some trifling spot on and it dies from chloroform before you have commenced to operate, there is some agony next morning when the old lady calls at your surgery. In concluding this rambling paper I may say that if one animal out of 50 were to die under your charge you had far better from a financial point of view have lost the price of the horse.

Discussion.

Mr. Roberts referred to the painful nature of the disease anthrax in horses, and also to the slaughter of animals which had been in contact with those diseased, and thought it was quite time that something was done to prevent such a waste of public money.

Mr. Stevens corroborated Mr. Robert's statement as to the painful symptoms presents in horses suffering from anthrax, and said that in the cases he had seen they seemed to have colicky pains, and in one the loose box was covered with foam.

Mr. Hancock thought that the action of the Local Authorites in Yorkshire in regard to a recent outbreak of the disease was altogether wrong.

Mr. Awde believed that there was great danger of the bacillus of anthrax being brought to the surface of the ground by earth worms.

Mr. Roberts proposed and Mr. Stevens seconded the following resolution which was carried unamiously:—"That in the opinion of the members of this association there is no necessity for the wholesale slaughter of cattle on account of outbreaks of anthrax, which disease is usually propagated by means of food and water, and is not directly communicable from animal to animal as in infectious diseases generally; and they consider that Local Authorities should not have the power to slaughter animals which have been in contact with those suffering from the disease as recorded in several recent outbreaks."

Mr. Stevens proposed and Mr. Awde seconded the vote of thanks to the President for his address.

The Secretary read a letter from Mr. Nash of Richmond tendering his resignation as a member of the association owing his indifferent attendance at meetings, but it was unaminously decided to ask him to reconsider the matter.

Mr. Harvey proposed and Mr. Hill seconded that discussion on "Professional Charges" be adjourned—Carried.

The Annual Dinner.

Subsequently the members dined together at the North Eastern Hotel. Mr. Deans presided, Mr. Stevens occupying the vice-chair. An excellent dinner was provided by the Misses Parsons. After the loyal toasts had been heartily honoured, Mr. W. A. Hancock proposed the toast of "Success to the South Durham and North Yorkshire Veterinary Medical Association." He con-

gratulated them upon the rapid strides they had made during the time their association had been in existence. (Applause). It was five years since they started, and he was rather sorry at the time that they did start, because he thought they would have rather an up-hill struggle. However, any forebodings he might have entertained then had been driven to the winds, because their meeting that day had been quite as successful as any meeting he had ever attended since he had been connected with what he might describe as the parent association in Newcastle. Applause).

The Hon. Secretary (Mr. Awde), in responding, said he believed that at the time when the association was formed there was considerable apprehension in the minds of many that it would not succeed, but since the association was launched it had done quite as well as they ever expected it would. (Applause). That success had been contributed to by the way in which members had supported the association by attending the meetings and reading papers. (Hear, hear.) If the members would only stick to the Association in the future as they had done in the past, he did not think there was any reason to fear the Association would not go on and prosper. (Applause.)

Other toasts were "The Visitors" proposed by Mr. G. J. Harvey. and responded to by Mr. Gibson, and "The Press," proposed by Mr. Roberts, and responded to by Mr. J. H. Williams, of *The North Star*.

NATIONAL VETERINARY ASSOCIATION.

ANÆSTHETICS IN VETERINARY SURGERY.

By E. Wallis Hoare, F.R.C.V.S., Cork.

(Read before the meeting at Manchester, July 27th.)

In veterinary practice the use of anæsthetics is yet far from being general, or their action perfectly understood; yet we must admit that we are making vast strides in this direction, as year by year we become convinced of their safety and utility. It has often been a matter of comment why the use of anæsthetics has not become general in operations on animals, especially so when we consider that before being used on mankind their safety was proved by experiments on animals.

It is not because there are no benefits to the patients as a result of the use of an anæsthetic, as, leaving out the question of pain in a sense of humanity, we have the shock to the system superseded, an absence of constant and often harmful struggling. And next we have the benefits to the operator, which no practitioner who has ever operated with the subject under chloroform will deny. Humanity demands that, with an agent so safe to administer and easy of application, it is our duty to prevent pain and suffering during long and tedious operations.

But while we might discuss at length the advantages, we have, as in all other aids to surgery, to review the disadvantages, and also the objections brought forward by those who contend that the use of anæsthetics is not necessary in our practice.

Many of these are not only frivolous, but opposed to plain facts, as we shall endeavour to show.

For convenience of description we may classify the objections under five heads :—

1st.—The risk of the animal dying under the influence of the agent employed.

2nd.—The extra cost incurred.

3rd.—The extra time spent in bringing the patient under the influence, and waiting for the effects to pass off.

4th.—The primary excitement causing the animal to struggle violently, with risk of injuring the vertebral column.

5th.—The after effects, and their result on the operation wounds, etc.

The first objection, viz., the danger to the animal from the action of the drug employed, on the respiratory and circulatory systems, occupies a very minor position in the case of horses as compared with human beings and dogs. Having experimented with chloroform on old and worthless horses whenever opportunity offered, I can safely say that even wilfully and intentionally it is sometimes impossible to destroy a horse by its use within a reasonable time, and except with large amounts of the drug.

We cannot deny that there is a certain amount of risk incurred in the case of organic disease of the circulatory system, which may have escaped detection prior to administration; but we may also consider that human surgeons often have to take a similar risk, and we certainly would not compare the value of human life to that of animal life, or the responsibility of the human practitioner in a moral sense to that of the veterinary surgeon.

The cause of dangerous symptoms occurring during the state of anæsthesia, leaving out individual peculiarities and cardiac affections, may be ascribed to improper administration, *i.e.*, either allowing too much of the agent at one time, or administering too slowly with a proportion of air, until the system becomes saturated with it.

These points will be again referred to under the head of Administration. Out of a large number of horses in which anæsthesia was produced for the purpose of surgical operations, I have only seen two instances where anything like dangerous symptoms supervened; but even these recovered under treatment.

I regret that I am unable to produce any statistics of deaths in horses occurring from chloroform, but if such exist it may be confidently stated that the mortality must be very small. We shall find, however, when considering the action of this drug on dogs, that the very opposite results have to be recorded.

The second objection to the use of anæsthetics, viz., the extra cost incurred, can hardly be entertained at all, as methylated chloroform costs about 2s. 4d. per pound, and for short operations about two ounces will be sufficient as a general rule.

It may be suggested that a second practitioner would be required, and this would cause extra expense to his client; but although in long and critical operations a second practitioner would be required, we must admit that leaving out the question of an anæsthetic being used, he would be of the greatest advantage, and in our present condition of professional ethics, it ought to be no difficult matter to find a confrère who would give his assistance without a fee, or without causing rivalry or jealousy, when he considers that not only would he be aiding his professional brother, but also elevating the standard of veterinary surgery, two objects which should always be placed above all others in our minds.

The third objection, viz., the extra time involved, is one which has been enormously exaggerated. When administered in a proper manner there is by no means such a delay as those who have not used the agent would imagine. Of course we do not deny that some extra time is spent, but this is very well compensated for in the advantages gained.

The fourth objection, with reference to the primary struggling in some cases causing injury to the animal, may be disposed of in a few words, as such struggling is usually very little as compared with what occurs where no anæsthetic is used. As we shall see, too, further on, this primary struggling depends a good deal on the method of administration.

The fifth objection is one which we have heard raised only recently ; but so far there is no evidence to support it, as we can with confidence say that with regard to the healing of operation wounds and the after effects, if the anæsthetic has any effect it is a favourable one.

Having disposed of the objections and disadvantages brought forward to the use of anæsthetics as regards the horse, we may remark that as regards the dog, which will be treated of further on, a very different state of affairs will be found to exist—at least as regards the action of chloroform in that animal, which not only requires great care in administration, but is in many cases highly dangerous to use.

Anæsthetics are classed under the headings of General and Local, and in human practice a large number of drugs are enumerated under both headings.

For our purpose, however, it will be sufficient to notice only those used in actual practice, and concerning which we possess some definite knowledge as to their actions and uses. It will be sufficient then to notice under the head of General Anæsthetics—Chloroform and Ether; and under the head of Local—Cocaine.

General Anætshetics temporarily arrest the nervous tissue of the convolutions of the brain, and thus remove consciousness and sensibility to pain.

They are a branch of that class of agents called Narcotics, which include a large number of drugs, each differing, however, in their action on the cerebrum and the medulla oblongata and spinal cord, as regards the rapidity of involvement of these different portions of the nervous system. These may be represented by Chloroform, Ether, Alcohol in large doses, Chloral, and Opium.

The ultimate action of all these drugs is similar, that is, depression followed by paralysis of the vital centres in the medulla, but the period of the invasion of the cerebrum and medulla differs in some as compared to the others.

Some act first on the cerebrum, stimulating and then depressing, and next on the medulla and cord ; others act in both divisions of the nervous system simultaneously.

The members of the first group are those which are selected for the purpose of anæsthetics, because of the safe order of their invasion of the nervous system.

The convolutions of the cerebrum are first stimulated, then depressed, represented by the state of unconsciousness ; and it is not until this state is reached that depression of the vital centres in the medulla occurs. The members of the second group, represented by opium and chloral, act in the cerebrum and medulla at the same time, so that by the time the state of unconsciousness is reached there may be dangerous depression of the medulla and vital centres. They are, however, valuable and important—when not pushed to such an extent—in the treatment of some forms of disease, such as for producing sleep and soothing the vital functions when such are greatly disturbed.

It is clear then the reasons that chloroform and ether are employed as General Anæsthetics, and the results of practice amply justify their use. In these drugs there is the least possible danger of paralysing the vital centres, provided the administration is kept within safe limits.

The physiological action of chloroform on the healthy animal is not only very interesting, but is useful as a guide to its safe administration for surgical purposes.

Although with slight modification, depending on the individual animal, and the method of administration, whether given in large quantities with air excluded, or in small amounts with access of air, it is possible to divide its action into three tolerably distinct stages.

The first effect of the inhalation of the drug is stimulation of the central nervous system : the activity of the cerebrum is roused, which causes excitement, followed by disorder of the senses, and depression. The muscular centres are also stimulated. These effects are shown in the horse by neighing, struggling, etc., but, as before remarked, they differ according to the individual, as regards duration and intensity. The pupils become slightly dilated, and the eyes rotate in their sockets. The medulla is next acted on : the centres of respiration and circulation are stimulated, blood pressure is raised, the pulse becomes frequent, the respirations accelerated, though shallower, and there is slight perspiration on the skin.

The second stage is characterised by depression of the same portions of the nervous system as were previously stimulated. The functions of the cerebrum become arrested, there is cessation of consiousness, and reflex excitability is first diminished and then lost. Muscular tone is also lost, and the peripheral nerves are last affected, so that the loss of sensation must be ascribed to a central effect.

In works on anæsthetics in human practice we find great importance attached to the condition of the eyes. They are described as slightly dilated in the first stage, contracted in the second stage, and dilated in the third ; also in the second stage the reflex action on touching the cornea is lost, so that there is neither moving of the eyeball nor winking of the eyelid.

From observation in horses, I do not think that these changes occur in a similar manner. I have often noticed the pupils to remain dilated during the whole period o anæsthesia, and also that the cornea was sensible to reflex action when to all appearance there was no sensation over the body. Of course, in fuller anæsthesia the reflex action would be lost.

The second stage of chloroform anæsthesia is a very important one, as it is the period during which the surgeon can operate without causing pain.

Great care is necessary not to push the administration further, or the third stage will be reached.

In the third stage, all reflex excitability of the medulla and cord is completely lost from the continued action of the drug. The respiratory centre is paralysed, so that the respiratory movements become irregular, shallower, and finally cease altogether. The heart beats irregularly and feebly, and at last stops in diastole, both from central and direct nervo-muscular depression. There is general dilatation of blood vessels, and it may be assumed that the depression in the respiratory centre is increased in the later stages by the venous condition of the blood. It has now been proved conclusively that respiration ceases before circulation, and if artificial respiration be adopted before the centre is totally paralysed, the patient can be saved.

It is surprising to find the great resistance possessed by the horse to the toxic effects of chloroform, as compared with human beings and dogs. In two instances I have failed to cause death in horses by the administration of large amounts, and continued for a long period of time. My first experiment was on a very old mare, her owner did not consider safe for driving purposes. Being an old favourite, it was thought the best plan was to destroy her in the most humane manner, and I advised chloroform, having just obtained Carlisle's Chloroform Bag, and being anxious to try its utility. Some medical men saw this apparatus, and assured me that it would destroy the first horse to which chloroform was administered, by reason of allowing no air, and you can judge of their surprise when, as a result of the experiment, it was found impossible to destroy this animal within a reasonable time, and with large amounts of the drug.

My last experiment was with a very old pony, in high condition, whose owner desired it to be destroyed, as being useless from repeated attacks of megrims. I commenced by administering two ounces of methylated chloroform with Carlisle's Bag. This was taken freely and anæsthesia soon was complete. The drug was then continuously pushed, until about twelve ounces were

used, and, after a tedious delay, death occurred after the space of half an hour. The pulse and respirations were first accelerated, and the pupils gradually dilated. As the drug was pushed the pulse was lowered in frequency and strength, and the respirations became shallow and irregular. In the later stages a long inspiration would occur, followed by an interval and then a series of short inspirations; and there was evidently a great struggle for the respiratory centre to perform its vital function. A short time preceding death there were convulsive movements of both fore legs, as if involuntarily fighting for breath. Longer intervals occurred between each respiration, until at last respiration ceased altogether. The pulse at this time was feeble and irregular, but the heart did not cease to beat for some time after the cessation of respiration.

But while we may draw conclusions as to the great resistance possessed by the horse to the toxic effects of chloroform, we are by no means to infer that we can be careless in its administration. Apart from the risk of causing death, if the anæsthesia is carried to an unwarrantable extent, there is the annoyance and delay in bringing back the patient to consciousness; and, in a similar manner to the action of other narcotics, we must expect after effects from an overdose.

When we come to consider the action of chloroform in the dog, we find that the majority of observers agree that, even with all due precautions, its use is in many cases attended with great risk. The exact reason for this we cannot decide, but of its truth we are fully convinced, not only from the fact of deaths occurring from its use during surgical operations, but also from experience gained in destroying worthless or incurable dogs with this agent.

In many instances respiration ceases almost without any preliminary warning, and in some cases death occurs with such rapidity that it would appear as if syncope was the cause. We have, too, the fact of the great amount of struggling and the degree of excitement induced in many dogs, to consider that the mechanical means by which the patient is held or secured has a great deal to do with the production of asphyxia. The bulk of evidence goes to show that generally speaking ether is a far safer agent to use for the production of anæsthesia in the dog, except when from some special reason its use might be contra-indicated.

(To be continued)

EXTRACTS AND NOTES.

HYPERTROPHIED PROSTATE.

Abstract of an Address delivered before the American Surgical Association.

By J. William White, M.D.,

Professor of Clinical Surgery, University of Pennsylvania.

The main practical points in reference to enlargement of the prostate are to be classified as follows: 1. The nature and chief varieties of the prostatic enlargement and their relation to the vesical changes found associated with them. 2. The symptoms in relation to diagnosis and prognosis. 3. The indications for treatment. 4. The choice of operation.

As to the nature of the enlargement, he thinks we are warranted in believing the function of the gland to be chiefly sexual, and in provisionally accepting the theory which recognises that the growth or growths which make up the enlargement in prostatic hypertrophy are analogous to those fibromyomata so frequently found in the uterus.

The changes in the bladder are occasioned by (1) the mechanical obstruction which the enlarged prostate offers to the ready and complete evacuation of its contents, (2) by the circulatory disturbance incident to pressure on the prostatic veins into which the blood from the vesical veins passes.

As to diagnosis: symptoms of obstruction to the free passage of the urine, associated with symptoms of cystitis when occurring in a man over 40 years of age, are generally due to enlarged prostate. If, on physical examination, there is no obstruction within seven inches of the meatus; if rectal examination shows that the prostate is enlarged; if the urethra is markedly lengthened; if soft or *coudé* instruments pass when Thompson's sounds are arrested, and if there is residual urine, the diagnosis is rendered nearly positive.

Treatment.

1. A purely expectant treatment is proper only in those in which enlargement has produced no symptoms, and catheterism is easy and shows no residual urine. Such cases would include chiefly those in which the prostate condition is recognised during a rectal examination instituted for other purposes. They are not infrequent. They often occur in comparatively young men.

2. As regards medical treatment: Ergot is the only drug which offers any prospect of usefulness, and it must be admitted, first, that it is indicated in only a small proportion of cases, and, next, that it is far from demonstrated that it has any distinct effect even then.

3. Palliative treatment consists (*a*) in the systematic use of steel sounds for purposes of dilatation; or (*b*) in the employment of the catheter, and is of the greatest value in a very large number of cases. (*a*) *Dilatation.* A patient who presents the symptoms of the prostato-vesical congestion of the early stages of hypertrophy, who is disturbed once or twice at night, who has an enlargement of moderate density, appreciable through the rectum, but not offering much resistance to the introduction of an ordinary catheter, and who has but little residual urine, is likely to derive great benefit from the systematic introduction of full-sized steel sounds. (*b*) *Catheterism* should be systematically employed in cases in which the quantity of residual urine is 3 or 4 ounces or more, and in which the introduction of the instrument is easy and painless, and the urine is sterile. The frequency should be proportionate to the amount and character of the residual urine.

As to the choice of operation, we are limited to the following methods, which are mentioned in the order of their gravity, as estimated by their probable risk, or by their mortality as determined by existing statistics, (1) overstretching of the prostatic urethra, (2) perineal prostatotomy, (3) perineal prostatectomy, (4) suprapubic prostatectomy, which is the operation to be preferred in all those cases in which, palliative treatment having failed, there are unmistakable indications that the local conditions are growing worse, the general health remaining as yet unaffected. The best possible period is that before the development of marked and continuous cystitis, while some power still remains in the vesical walls, and the bladder is neither thinned and dilated, nor rigid and contracted.

Professor White concluded his address as follows: I have one further thought which I have decided to mention to this Association, although I do so with a reluctance born of the fear of being considered illogical or impracticable—or perhaps both. It occurred to me some time ago that possibly, if the analogy between uterine fibromyomata and prostatic overgrowth was a real one, castration might have the same effect upon the latter that oöphorectomy does upon the former, and cause a shrinkage or atrophy which would result in the practical dis-

appearance of the obstruction. At the time I had never heard or read of the alleged prostatic atrophy in eunuchs, geldings, etc. While I was unaware that any allusion even had been made in medical literature to this subject, I instituted a series of experiments which were carried on for me by Dr. E. R. Kirby, of the University of Pennsylvania, and the results of which are subjoined. The microscopic specimens are here for examination by the members of the Association. In the experimental work dogs were used partly for convenience, partly because it is known that in this animal the prostate occasionally undergoes changes similar to those which are found in the human prostate. The literature was carefully looked up, and no reference as to the average or normal weight of the prostate in dogs could be found. For control experiments thirty-five dogs and their prostates were weighed, and their average weight taken as a standard. The average weight of the prostate was found to be 15·3748 grammes. The relative weight of the prostate to the weight of the dog was also taken into consideration, and is given in each case. The dogs were castrated and killed at different intervals. The prostates were hardened in alcohol, cut by the freezing colloidin method, stained with borax carmine, and mounted in Canada balsam.

No. 19. Weight of dog, 15 kilos.; average weight of prostate in dogs weighing from 14 to 16 kilos. inclusive, 15 g. Dog killed at the end of seventeen days; weight of prostate, 5.420 g. In this specimen the normal relation of the different structures seems to exist; no change noted.

No. 21. Weight of dog, 14 kilos.; average weight of prostate in dogs weighing from 13 to 15 kilos. inclusive, 13 g. Dog killed at the end of twenty-one days; weight of prostate, 5.700 g. In this specimen commencing changes in the glandular structure are seen. The muscle fibres show but little change. From this it would seem probable that the glandular elements are the first to undergo atrophy.

No. 20. Weight of dog, 14 kilos.; thirty days; weight of prostate, 2.600 g. The glandular structure shows well the beginning atrophy. The glands are irregular in outline, smaller than normal, and separated from each other by considerable connective tissue. Very few muscular fibres are to be seen.

No. 4. Weight of dog, 20 kilos.; average weight of prostate in dogs weighing from 19 to 21 kilos. inclusive, 19 g.; thirty-two days; weight of prostate, 2.620 g. The picture is here about the same as that seen in No. 21.

No. 16. Weight of dog, 15 kilos.; average weigh of prostate in dogs weighing from 14 to 16 kilos. inclusive, 14 g.; forty-one days; weight of prostate, 5.700 g. In this specimen the glandular elements are but slightly atrophied, especially in some places Many muscular fibres can be seen, all, however, atrophied.

No. 13. Weight of dog, 31 kilos.; average weight in dogs weighing from 29 kilos. upwards, 30 g.; fifty-four days; weight of prostate, 4.420 g. Atrophic changes well marked; the connective tissue elements predominating.

No. 14. Weight of dog 23 kilos.; average weight in dogs weighing from 22 to 24 kilos. inclusive, 21 g.; 54 days; weight of prostate, 2.700 g. The glands show somewhat better in this specimen, but are widely separated from each other by bundles of connective tissue. The muscular fibres cannot be distinguished from connective fibres, and the longitudinal stripes are well marked.

No. 24. Weight of dog, 15 kilos.; 60 days; weight of prostate, 1.500 g. Presents practially same picture as No. 13.

No. 9. Weight of dog, 22 kilos.; average weight of prostate in dogs weighing from 21 to 23 kilos., 21 g.; 61 days; weight of prostate. 4.000 g. Here and there in this specimen may be seen masses of closely packed cells evidently the remains of the glands. Few muscular fibres can be made out. Longitudinal stripes well marked. No nuclei to be seen.

No. 8. Weight of dog, 25 kilos.: average weight of prostate in dogs weighing from 21 to 29 kilos., 21 g.; 65 days; weight of prostate, 64.500 g. There is considerable atrophy of both the glandular elements, connective tissue predominating.

No. 5. Weight of dog. 26 kilos.; 72 days; weight of prostate, 3.920 g. In this this specimen but little of the glandular structure remains. What gland acini can be seen are very small and irregular in outline. There are but few muscular fibres to be seen, and their outline is not sharply defined. No nuclei can be seen.

These results, which I believe may be relied upon place beyond all peradventure the influence of castration (in the dog at least) upon the condition of the prostate and show clearly that that operation is followed invariably, and with a promptness which I must confess was to me surprising, by atrophy first of the glandular and then of the muscular elements, and by a coincident reduction in both bulk and weight. Since instituting them I have become familiar with Griffiths's admirable papers, and have learned from them the following corroborative facts:

John Hunter observed that in the mole the prostate gland in winter was "hardly discernible, but in the spring becomes very large and filled with mucus." Owen confirms this, and adds that "the prostate gland in the mole begins to increase in February, and acquires an enormous size, and conceals the urinary bladder towards the end of March." Owen found similar changes in the prostate of the hedgehog. Griffiths examined for himself the generative organs of the mole and the hedgehog in and out of the rutting season, and found the above observations to be correct. He made a number of sections of the gland in the quiescent state and others during the period of sexual activity. During the former period he found it composed of a few tubules lined by flattened and small epithelial cells, undoubtedly functionless as regards the production of any secretion, but possessing the power of reproducing glandular epithelial cells at the appropriate period. Precisely similar phenomena were observed in the seminiferous tubules of the testicle, and in both the changes were preceded by an increased vascularity of the whole tract, determining an increased growth of all the glands and parts concerned in generation. As to the effects of castration. Hunter again was the first to note that while the prostate of the perfect bull is soft and bulky, that of the castrated animal is "small, flabby, tough, and ligamentous."

Griffiths contributes four observations of his own, two in the dog and two in the cat, the castration having been performed for other reasons years before, in all of which the prostate had been transformed into a mass of fibrous connective tissue containing the remains of the once active gland tubules with a small number of atrophied muscle fibres. He also examined the generative organs of the pig, bullock, sheep, and horse after castration, and found that in each case like changes had supervened.

I learned further that Gruber had observed marked atrophy of the prostate in a man aged 65 who had been castrated in early youth; that Bilharz, in a thesis on the *Anatomy of the Genital Organs of Two Ethiopian Eunuchs* (Berlin, 1859), confirmed Gruber's observations; and that Pelican, in a book devoted to the study of a peculiar sect in Russia, says that the prostates in eunuchs are about the size of those found in children.

Futhermore, Civiale has noted the fact that in doing a lithotomy on a man who had undergone complete castration for the cure of a double hernia, he found that the prostate had practically disappeared.

In the female oöphorectomy causes a disappearance of uterine growths and an atrophy of the uterus itself. Castration almost certainly has the same effect upon the normal prostate in our species, and I have experimentally demonstrated that it has such an effect in dogs.

It remains to ask: (1) Does this evidence warrant us in believing that castration in cases of hypertrophied prostate would be followed by a disappearance or diminu-

tion of the growth? (2) If so, is it likely that the fact can ever be taken advantage of as a therapeutic measure?

I might admit, finally, that I have not had the courage of my convictions, and have never seriously sought to recommend the operation, but it would be truer to say that I have as yet no definite convictions, and that I am simply seeking enough light upon the subject to convince me either that it is worth pursuing further, or, on the other hand, that it offers no possibility of practical usefulness.

[This extract from *The British Medical Journal* is chiefly interesting to those veterinary practitioners whose work includes the diseases of dogs. Enlarged prostate is by no means uncommon in dogs.—ED.]

A SCANDALOUS MEAT CASE.

At Tavistock County Court on Saturday, before his Honour Judge Edge, James Easterbrook, farmer, Lamerton, sued William Salter, butcher, Tavistock, for £5, balance on the sale of a bullock.—Mr. C. H. Peter, of Launceston, for the plaintiff, said in this case the facts as deposed to him shewed that the defendant was not only trying to evade an honest debt, but trying to evade payment by an attempt at fraud. The plaintiff had a bullock for sale on September 5th. There was something the matter with its udder, and it was seen by Mr. Heard, a veterinary surgeon, of Tavistock. It was thought that the bullock should be killed, and the defendant agreed to pay the plaintiff £7 for it as it was. The bullock was killed. Salter paid £2 on account, and promised to pay the balance on the following market day. The plaintiff delivered the carcase to the defendant at Tavistock, and next day received a letter from the defendant saying that the bullock had gone bad, and that he was going to send off a portion of it to Plymouth by train early the next morning. He (Mr. Peter) did not know whether it was to be sent to Plymouth for human consumption. The plaintiff came into Tavistock on the following Friday, when the defendant said to him, "It is a bad job. I sent the forequarters down to Plymouth, but the hindquarters turned black, and I had to destroy them." The defendant also stated that Mr. Mason, the sanitary inspector at Tavistock, had condemned the meat, that he was consequently forced to suffer considerable loss, and he hoped Mr. Easterbrook would make an allowance. Mr. Easterbrook was not satisfied, as he had not seen much amiss with the animal. He noticed that there was no meat on the defendant's market stall, but afterwards saw him bring from the direction of his shop a hindquarter of beef, which he strongly suspected was one of the quarters which Salter said had gone bad. In the afternoon the plaintiff went to the defendant and told him he was not satisfied about the bullock. The defendant said "Mr. Mason condemned it, and I had to destroy the hind-quarters. The dogs had one, and I buried the other quarter." On being pressed the defendant said he did not bury the quarter, but sold it to an offal merchant, whose name he declined to disclose. James Easterbrook, son of the plaintiff, bore out counsel's opening statement. He said the fourth September was a cold night, and the animal, which was a little fat heifer, caught a cold, and had inflammation of the udder. When the bullock was being dressed, the defendant only complained that it had a bruise about the size of a crown piece. Witness ascertained that the defendant sold the two fore-quarters, weighing 2cwt., to a Plymouth butcher for £2. When defendant told him that Mr. Mason had condemned the meat, witness told Slater he was a liar.—John Dark, in Mr. Easterbrook's employ, said the bullock was in his charge. It was ill about four days before it was killed. Salts were administered to it on the morning of the day it was slaughtered, but previous to that it had not had any physic.—Mr. W. J. Mason, sanitary inspector, stated that Mr. Easterbrook asked him about inspecting the carcase of a bullock, and he told him that he had not done so.

The defendant was called, and stated that when he saw the bullock at Lamerton it was unable to move, and he slaughtered it. When the bullock was dressed in Tavistock he found it was scarcely worth anything. He wrote and told the plaintiff that it was no good for his stall, but that he was going to send the portion which was good to Plymouth. He did so, and the Plymouth butcher had asked him not to send him such meat again, as the animal must have been ill for weeks. Mr. Durham, of Tavistock, bought the tallow, and the rest was thrown into the ash buckets.—By Mr. Peter: I did not mention Mr. Mason's name to Mr. Easterbrook, and I don't know why he went to him. I consider the man was tight. (Laughter.) I did not say I sold part of the bullock for offal. The man who took it away in the ash buckets is not here. Mr. W. H. Heard, veterinary surgeon, Tavistock, said when he was called to see the bullock he found it lying down, groaning, and in great pain. It appeared to be dying, and witness suggested that Salter, who had accompanied him to Lamerton, should kill it, which he did. The following morning witness examined the liver, intestines, and other parts. The liver was rotten, and there was a large abscess in the middle. The fat was discoloured, and the intestines were quite black. The primary cause of death was the liver, which had been diseased for months. Witness did not examine the carcase, as it had been taken away.—By the Judge: I presume that the portions I examined were parts of the bullock in question, as they were in Mr. Salter's slaughter-house.—His Honour: Do you think it is possible that the flesh might have been fit for human consumption?—Witness: Yes, provided the bullock was not physicked.—William Jackman, butcher, stated that he was engaged by the defendant to dress the bullock. The fat was gone to a jelly, and the defendant said they must make the best of a bad job.—By the Judge: The carcase did not seem to be fit for food. It smelt quite bad. I have killed a great many bullocks, but I never saw one so discoloured, or the fat so soon turn to a jelly. Mr. Peter: Why did you dress the bullock if it was not fit?—Witness: Simply because I have to work for my living, sir, like you.—His Honour remarked that it would be rather difficult to dispose of half a bullock in ash buckets, and if the defendant had asked the scavenger to remove it, it seemed strange that he should not have called him as a witness.—The Judge having instructed a bailiff to fetch the scavenger, that individual denied that he had ever taken away any portion of a bullock. Half a bullock would pretty well fill up his cart.—On inquiries being made for the defendant it was found that he had left the court.

His honour said he believed there was an attempted fraud on the part of the defendant. He had no doubt whatever that the bullock was not in such a condition as it ought to have been, and that the public had had to take it, willingly or unwillingly. The public probably had to take a great deal of such meat. There would be a verdict for the plaintiff, with payment forthwith, and the costs.

A HORSE KILLED BY WASP'S STING.—At Yeoval a powerful draught horse, was stung near the shoulder by a wasp. Great swelling shortly afterwards set in, and the animal was treated by Mr. Simes, veterinary surgeon. The swelling was reduced, and the animal apparently got better, but shortly afterwards sickened and refused to take food, and death took place. A post-mortem examination revealed the fact that the blood near the region of the heart was congealed—caused, it is supposed, by the poisoning of the blood through the sting of the wasp.

BERMONDSEY DISEASED MEAT CASE.

The case of John Palmer, meat salesman, Charterhouse Street, was heard before Sir P. H. Edlin, at Newington, the 14th inst. The defendant was indicted for selling certain beef which was unfit for the food of man. Mr. Horace Avory for the prosecution, said the defendant was charged under the Public Health Act, 1891, with having sold unwholesome meat to the person on whose premises it was afterwards found. The meat was seized on the 25th July, at the shop of Mr. J. E. Armfield, 71 Bermondsey New Road. It was taken to the Bermondsey Town Hall, where it was inspected by Mr. Slade, the Southwark magistrate, who condemned it, and ordered it to be destroyed. Armfield was summoned and fined for having the meat in his possession. The defendant was then summoned for having sold the meat to Armfield, and he should prove that it was bought of Palmer, and that at the time it was sold a ticket was produced with his name upon it. It would be suggested to them that at the time the meat was sold the defendant did not know that it was in an unsound condition, but he (Mr. Avory) contended that under the provisions of the statute in force a man who engaged in the meat trade or any other trade was bound to take every possible precaution against infringement of the statute. It was no answer for him to say that he did not know what was going on in his own shop, and he was liable unless he proved that at the time he sold the article he did not know and had no reason to believe that it was in such condition.

Alfred R. Iles said he was assistant to Mr. Thomas, sanitary inspector of Bermondsey, and had had some years' experience as a practical butcher. On the 25th July he saw some beef being cut up in the shop of Mr. Armfield, 71 Bermondsey New Road. As it was cut off the thick flank he saw yellow pus, indicating pleuro-pneumonia. He also found traces of physic with which the animal had been dosed before it was killed. The meat was unwholesome and unfit for food. He took it to the Bermondsey Town Hall and showed it to Mr. Thomas. The name of the man in the shop was Cripple. He did not at that time show him a ticket indicating where the meat came from, but he did so subsequently, when Mr. Thomas was with him. Mr. Thomas saw the meat at the Town Hall, and Mr. Slade inspected it the next morning, and condemned it.

Cross-examined by Mr. Buckmaster, witness said the shop of Mr. Armfield was a large one, and there was forty stone of beef or more beside that seized which he examined and found good. It was the presence of the pus that attracted his attention. It did not come from the hip joint or knee, but was spread about the meat. He did not say that the animal had died, but that it had suffered from pleuro-pneumonia. He could tell by the smell that it had been physicked.

Mr. Buckmaster:—Assuming that the animal was quite healthy and had received some injury to the joint, would that not cause the appearance of pus?—No, it would not, the secretion of matter arising from accident and from disease is different. He did not test the pus in any way.

By Mr. Avory:—He had killed oxen which were diseased, and the meat seized corresponded in appearance with the flesh of diseased oxen. The whole of the meat seized formed part of the hind-quarter, and in almost all the pieces taken off the board there were traces of disease. The meat was not stale but freshly killed—about 35 hours he should say.

Henry Thomas, sanitary inspector to Bermondsey Vestry, said he inspectad the meat at the Town Hall, and found it unwholesome. It was very thin, there was an utter absence of fat, and it was very wet. He found the muscles surrounded with yellow pus or fatty matter. It had an offensive smell, and was decidedly unfit for the food of man. He went back to Armfield's shop with Iles, and found on the shop board a quantity of beef cut up into slices, which had come off the same hind quarter he had seen. It smelt the same, and was wet and flabby. He seized it, and it was afterwards examined by Mr. Slade, and ordered to be destroyed. A ticket relating to the meat seized was shown him by Cripple in Armfield's shop.

Replying to Mr. Buckmaster, witness said the meat was the hind quarter of a diseased animal, and the disease was indicated not only by the presence of pus and the offensive smell, but by the wetness and leanness of the meat. Pus was not found round the muscles of any healthy animal. He inserted his finger beneath the muscles, which separated from the meat without the slightest force or pressure. Mr. Buckmaster:—I believe you can find pus in the joint of an animal where the animal has suffered from some injury?—No, I should think not. You might in the knee joint if the injury was there. Could you not find it in the hip joint?—You might. And that would not be discovered until the joint was open?—No. Was not the joint exposed when you saw the meat at the Town Hall?—No, I don't remember the hip joint being exposed at all; the meat was cut off, but the joint was not exposed

Wm. Taylor, Jamaica Road, Bermondsey, said he was a butcher, and had had fourteen years' experience in the trade. He saw the beef at the Town Hall on July 25. It was wet and sloppy and very poor, and had a strong physicky smell about it. It was unwholesome and unfit for food. The animal must in his opinion have been diseased before it was killed.

Frank Cripple, manager at Mr. Armfield's shop, said he remembered some meat being seized on the 25th July by Iles, and also Thomas and Iles coming back to the shop and seizing some more meat from the shop board. He showed them a ticket relating to the meat—a ticket of the weight. That ticket was lost. He laid it down after showing it to Thomas, and took no more notice of it. It was given him in the morning by Lovering, who bought their meat in the market. He did not know what name was on the ticket. The meat seized was all part of the hind quarter. He had cut the rump and loin in pieces, and part of that was afterwards seized. He remembered Thomas asking him from whom the meat came.

Mr. Avory:—Where did you get the information from that enabled you to answer Mr. Thomas's question?—I had my information from Lovering. He was not in the shop at the time. He knew the handwriting on the ticket that usually came from Palmer's. He had one that day, and it was the ticket he showed to Thomas.

Cross-examined, witness said he could not swear that the tickets from Palmer's were always in the same handwriting, or that the particular ticket he showed to Thomas related to the meat seized. He only went by Lovering's word. When Lovering brought the meat in the morning he brought back the tickets of the weight. They were not used in the office for checking the accounts as Mr. Armfield paid for the meat in the market.

Mr. Iles recalled stated that Cripple showed to Thomas a ticket relating to the meat seized, and he saw that the name on it was J. Palmer. He would not swear there was a date on it. The weight was fifteen stone some pounds.

Gilbert Lovering said he was in Armfield's service in July, and on the 25th of that month he bought meat for him and delivered it at his shop. He bought of various salesmen, but could not swear that he bought of Palmer on that particular day. When he bought meat he got a ticket and took it to Armfield. He remembered the sanitary inspector coming to Armfield's shop on the 25th July.

Cross-examined: Did you see the meat that was seized? No.—Then how do you know that the meat seized came from Palmer? I had meat from Palmer, but I don't know whether this meat seized came from Palmer's. I was not there when it was seized.—All you knew was that a hind quarter of beef had been seized? Yes.

In reply to further questions witness stated that he bought about 200 stone of meat on the day referred to. He returned to Armfield's shop about eight in the morning. He was asked where the meat came from before it was seized. He did not see where the meat was placed in the shop, or what was done with it. He had had much experience in choosing meat, and whatever meat he bought of Palmer he judged to be good. He could not swear that he bought anything of Palmer that morning.

J. E. Armfield, 71, Bermondsey New Road, replying to questions, said some meat was seized at his shop on 25th July, and afterwards condemned by the magistrate, and he was summoned for having it in his possession. The meat was paid for with other accounts on the Friday, but he could not say that particular meat was included in Palmer's account. The deposition of the witness at the police court was produced, and he admitted that the words therein "certain meat was seized at my shop on the 25th July and condemned. I paid Mr. Palmer for the particular hind quarter—it was part of his account" were true. He added that the shop was under management, and that he was not there at the time. He had accounts with Palmer running from week to week, and in the account for the week, which included 25th July, a hind quarter of beef was charged, but whether it was the hindquarter that was seized or not he did not know—his manager would know more about it. The price 1s. 6d. a stone was low, but not for that week, as meat ruled very low that week.

Mr. Buckmaster, for the defence, contended that it had not been shown that Mr. Palmer himself had anything to do with the selling of meat on the day in question, and that he had no knowledge that the meat sold was bad.

After the adjournment Mr. Avory, having stated that the prosecution had no intention of charging the defendant personally with having wilfully and knowingly sold unsound meat, Mr. Buckmaster said he would not proceed further with the defence, and a verdict of guilty was taken by order of the Court. The Judge remarked that the investigation showed that there was no reflection cast on the defendant's commercial character, but there had been an infringement of the statute, and he therefore imposed a penalty of forty shillings.—*Meat Trades Gazette.*

CORRESPONDENCE

(The two following letters were unavoidably held over last week).

MILK-FEVER.

SIR,

We have had a hot dry summer and as for flies and wasps, I never saw such a host in all my life; do you think I have disturbed a hornet's nest with my remarks anent Milk-fever? as I find there are three Richmonds in the field?

Mr. Barron writes, that he is sorry I was not at Manchester; so am I, for I do really enjoy the social and professional gatherings of the National Veterinary Association; but Mr. Barron seems to be sorry because much of your valuable paper would have been conserved; are you sorry Mr. Editor? What are your pages for? If you cannot get clinical articles get something else.

Mr. Barron begs to say he read my remarks on milk fever but he certainly puts his own construction on them; in fact he invents the word absorption to suit his own purposes and then wants to put it into my mouth; that is just where the difference comes in, I say again that the colostrum has not been secreted, then how can it be absorbed? but I hold that the system of a parturient animal is loaded, or surcharged with the materials—elements if you like—from which the colostrum is formed and carried to the mammary gland, by the blood; afterwards to be eliminated from the system by the action of the milk cell. But if these cells have lost their tone by the too hasty withdrawal of all the milk, *i.e.*, by the too sudden removal of pressure, then, I say; "When the milk producing cells fail to perform their function they are in a state of collapse" a good word I think, yet Mr. Barron attempts to be funny over it.

Mr. Barron says "there are no clinical indications of the condition in cases of milk fever. "A pathological condition would appear if Mr. Thompson's descriptions were correct." and in the next sentence he says "The udder is *lax and flabby*, secretion of milk diminished, otherwise normal." What is "lax and flabby" but collapse? I say there is no anatomical derangement of the udder, but there is a decided physiological one—the loss of function to secrete milk and colostrum.

The following extract from Mr. M'Connell's letter vide *Veterinary Record*, page 167 is very illustrative. Mr. M'Connell says, "Wherein do the elements of colostrum and milk differ so materially I would like to know, that when the secretion of the former, *i.e.*, the colostrum—is suppressed there is produced such a grave disease as milk-fever, and yet when the secretion of the latter—*e.g.*, milk—is suddenly stopped, as frequently takes place from various causes, no such disease is forthcoming." This I think shows that at the time of parturition there must be other materials in the system from which the colostrum is secreted, or why don't we have similar attacks at other times by the sudden stoppage of the secretion of milk. The blood as Mr. Barron says "though perhaps hydræmic" may it not at the same time be an hydræmic? What becomes of the blood supplying the uterus after the fœtus has been repressed? Mr. Barron says that he was taught "that colostrum was the first milk, containing cells which *are either epithelium, or else leucocytes*"—doubtful this. Now if colostrum is the "first milk" how does it happen we have the milk containing it up to third, fourth, and occasionaly the fifth day after calving. I have seen milk on the fourth day contain so much colostrum that it would coagulate when baked in the oven, making what we call in Cumberland a "beast-milk pudding."

Again, how is it that after the third or fourth day after calving we are in such great hopes that the cow is past the worst time for taking milk-fever? Why because the loaded materials in the form of colostrum have been eliminated from the system. I think Mr. Barron will admit that at the time of parturition there is a certain amount of nervous excitability which in some cases is further increased; first, by the easy expulsion of the waters, fœtus and uterine contents, (seen more particularly in milk-fever patients) and the falling together of the sides of the uterus—collapse; second, by the removal of the calf from the presence of the mother; third, by the sudden withdrawal of all the milk from the mammary glands.

My contention is that the materials or elements, whatever they may be, from which the colostrum is secreted not being eliminated from the system by the proper channel, are thrown back upon the system and produce a toxic action. If these materials were once converted into colostrum by the action of the udder we should have no milk-fever.

There is no pathological change in the structures of the udder but a cessation of function, as it frequently happens that after ten or twelve hours comatose condition of the cow the udder regains its tone, the secretion of milk returns and the animal recovers.

Respecting Mr. M'Connel's letter; like him I have occasionally seen cases of milk-fever where the calf *was not removed* from the presence of the mother, but these cases have been found on investigation to be due to the human hand having assisted the calf three or four times a day to empty the gland; the reason is, that if the calf runs with the dam for four or five days without any milk being drawn, except that which the calf sucked, the cow was spoiled or difficult to milk by hand afterwards. Mr. M'Connell says he is pleased he has found an adherent in me to his theory of "the sudden emptying of the udder." At page 50 of the National Veterinary Association's Report of 1892 Mr. M'Connell will find that in January 1877 I promulgated this theory which was published in a paper called *The Practical Farmer*, and if Mr. M'Connell has arrived at the same conclusion we ought to congratulate ourselves, even if we are alone.

I now thank Mr. M'Connell for his extract which I have used in reply to Mr. Barron, and beg to remind him that reasoning from analogy, carbonic acid is very dangerous when inhaled, but highly refreshing when taken into the stomach, in the form of seidlitz powder, or better still a whiskey and soda. Or again, the elements of sodium and chlorine in an uncombined state are positively harmful to the animal economy, but when combined they form my old favorite, common salt, without which it would be difficult to exist. In the same way the matters or elements or colostrum when not eliminated from the body may have a toxic or narcotic action on the nervous system of the mother, but when by the physiological action of the mammary gland they are carried off by the milk, be highly beneficial to the young and delicate calf.

Replying to Mr. Pattison's questions; he will find answer for number one in my reply to Mr. McConnell; to number two question the same answer is applicable, that is:—too much milk is taken at once, the nutrition of the calf is not well kept up. Replying to the third question I have never in all my practice seen a case of milk-fever proper—that is where the animal is down and comatose—"where the function of the udder was preserved and the secretion not obviously diminished." If Mr. Pattison has seen such a case it would be worthy of record. I have frequently seen cows lose the use of their legs for several days during which time they would be quite conscious, feeding, chewing the cud and milking just as usual, but I do not class these cases as milk-fever.

There is one very remarkable feature in milk-fever that I have noticed, more particularly in big milkers, where the first milk drawn after calving is of a rich almost orange colour, and of a thick consistency: immediately all the milk is drawn off the animal goes down with milk-fever, lying in a comatose condition for ten or twelve hours—on her recovery from which the first milk that is drawn is almost devoid of colostrum and will scarcely coagulate on baking. Should the urine in such cases be removed by the catheter it has a very strong, pungent, sickly smell and an oil-like appearance.

In conclusion I would ask Mr. Barron and Mr. M'Connell when faulting my theory they would kindly substitute a better, and also ask Mr. M'Connell if he would kindly say how the chloral is supposed to establish its action on an unconscious, almost paralytic animal. I may say I have only had three cases since the commencement of the year—all recoveries—would you know the reason why? The dairy keepers and breeders are putting their calves with the dam for three or four days after calving.

HENRY THOMPSON, M.R.C.V.S.

Aspatria, Sept. 20th, 1893.

THE DORSET COUNTY COUNCIL.

SIR,

I have read with much interest the correspondence in your paper in connection with the Dorset County Council and their veterinary lecturer, and while I agree entirely in every point with your correspondents, I wish to say that there is another system of making quacks which if not in existence now, was when I was a student some six years ago, and which reflects not on a body of men such as the Dorset County Council (which can have no particular interest in the veterinary profession) but on the fathers of our profession, viz., the principals of the veterinary schools. I refer to amateur students. Now these, Mr. Editor, I consider much more dangerous to the interests of the country practitioner than anything that can arise from hearing a few lectures from a M.R.C.V.S. Those attending lectures such as the Dorset County Council purpose giving, are as a rule stock owners anxious to gain knowledge. but such knowledge is as a rule too limited to warrant them with confidence tampering with their own stock to any great extent. I believe those possessing such are more likely to patronise the qualified practitioner after acquiring it than before. Amateur students on the other hand, from having been at a veterinary college can pass themselves off as being taught at the same table as the qualified practitioner. One instance at least I knew; a man who had in his own idea gained a reputation for castration, and to enhance this reputation attended a few lectures at a certain veterinary college, during which time he saw no castration yet returned home armed with all the mysteries of a college life to continue his practice at the expense of his qualified brother. I do not mean, of course, to class all amateur students as such, but what I wish to say is that the system is bad, and far more likely to do harm than a M.R.C.V.S. delivering a few lectures for a County Council.—I am, yours etc.

JOHN L. ORR, M.R.C.V.S.

Strabane, 19th September, 1893.

THE TERM "FARRIER."

SIR,

With reference to the term farrier and its meaning, I think it will be a source of confusion for some time whilst our popular English dictionaries continue to put a wrong construction on the word. We see that the term farrier is defined as a veterinary surgeon in the following: "Nuttall's dictionary of the English language" based on the labours of the most eminent lexicographers, and "Cassell's dictionary of the English language." I am very pleased to see "Cassell's Storehouse of General Knowledge" has taken a step in the right direction by telling its readers that *a farrier is a shoer of horses who before the development of veterinary surgery was often also a horse doctor.* I am of the same opinion as you, Mr. Editor, that as long as the veterinary profession refuse the appellation themselves but decline to allow others its use this confusion will never be quite extinguished.—Yours sincerely,

W. H. CHAPPELL.

SIR,

I am sorry to again trespass on your valuable space, but I could never see why shoeing smiths were not registered under the heading of shoeing smiths. In all country places they are known by this title, or perhaps the more familiar one of blacksmith. I suppose because in London they are called farriers, we in the country are only showing our ignorance by not calling them by that name.

With regard to your remarks as to my being ashamed for having written the last paragraph of my letter in last

week's *Record*, so far I am not in the least. I have no doubt that because I was hardened enough to say a word against the Editor of *The Veterinary Journal*, there is a big black mark put in front of my name, even that would not trouble me. May I suggest, Mr. Editor, that if we are never to make use of any personal remarks when writing in *The Record* you are the man who should set us a better example, and in future not make use of sarcastic and personal remarks when next you write about a man we all know, and some of us very much respect, viz., Dr. Fleming.—Yours etc.

JAMES BLAKEWAY.

Stourbridge, 26th Sept.

EXAMINERS FOR FELLOWSHIP.

SIR,

I venture to hope that the report of the selection of examiners for this degree will be more fully recorded in *The Record* than was the case when the present examiners for the membership were appointed, as I fail to see why all the names proposed and the discussion thereon should not be fully reported. Thanking you in anticipation.—Yours truly,

FRANK G. ASHLEY.

Bath.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Capt. Smith, Messrs. T. M. M'Connell, Trevor Spencer, James Blakeway, A. Marshall, F. G. Ashley, J. Roalfe Cox, W. H. Chappell, H. Hogben.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

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